

## CLAIMS

### WHAT IS CLAIMED IS:

1. A composition of total triterpenoid sapogenins extracted from bamboo, wherein the content of total triterpenoid sapogenins in the composition is 10-90% as determined by vanillic aldehyde and perchloric acid colorimetry using friedelin as a standard, and the contents of friedelin and lupenone are 5-35% and 1-10% as determined by GC-MS, respectively.
2. The composition of claim 1, wherein the content of total triterpenoid sapogenins is 40-80%, and the content of friedelin and lupenone are 15-25% and 3-6%, respectively.
3. The composition of claim 1, wherein the total triterpenoid sapogenins comprise pentacyclic triterpenoids of friedelin, lupenone and their homologous compounds;

the total triterpenoid sapogenins are yellow or yellowish green powders with a melting point of 74-79 °C, and

the IR spectrogram performed by potassium bromide shows characteristic absorption peaks in the wave numbers of 2917, 2849, 1716, 1463, 1382 and 720  $\text{cm}^{-1}$ , and the UV spectrogram dissolved by spectroscopic pure  $\text{CH}_2\text{Cl}_2$  with a scan ranging from 300 to 700nm shows a strong absorption in the wavelength of 412 nm, a sub strong absorption in the wavelength of 665nm and a weak absorption in the wavelengths of 505, 535 and 605nm.

4. A method for extracting total triterpenoid sapogenins from bamboo comprising the steps of:

(a) mixing the material with the supercritical  $\text{CO}_2$  fluid, thereby making the low-polar substances of bamboo such as free triterpenoids dissolve in  $\text{CO}_2$  fluid, wherein the material is selected from the group consisting of poles, branches, leaves, shoots, shoot sheaths and roots of bamboo in Gramineae

family or their mixture, and the extraction temperature is 50-65 °C and the pressure is 25-35 Mpa;

(b) changing the pressure of CO<sub>2</sub> fluid containing free triterpenoids to gasify CO<sub>2</sub>, and separating the total triterpenoid sapogenins, wherein the separation temperature is 35-45 °C and the pressure is 5-10 Mpa.

5. The method of claim 4, wherein the material is bamboo powder with the granularity of 10-20 meshes, an entrainer is used in step (a) in amount of 5-15% (v/v) of CO<sub>2</sub>, CO<sub>2</sub> is recycled and the bamboo powder is circularly and dynamically extracted for 2-5h.
6. The method of claim 4, wherein the entrainer is selected from the group consisting of methanol, ethanol, acetone or the combination.
7. The method according to claim 4, wherein the bamboo is selected from the group consisting of *Phyllostachys*, *Bambusa* or *Dendrocalamus* genus.
8. A use of the composition of total triterpenoid sapogenins defined in Claim 1 in the preparation of (i) a medicine or a Chinese and Western complex formulation used to prevent or treat hypertension, heart failure, myocardial ischemia, cerebral ischemia, senile dementia and carcinoma, or (ii) a functional food or a complex formulation used to prevent or treat cardiovascular and cerebrovascular diseases, and carcinoma..
9. A use of the composition of total triterpenoid sapogenins defined in Claim 1 wherein it is used as a skin and hair care factor to prepare cosmetics.
10. A use of total triterpenoid sapogenins extracted from bamboo, wherein the pentacyclic triterpenoid sapogenins from the total triterpenoid sapogenins are used to prepare a medicine or functional food for preventing or treating cardiovascular and cerebrovascular diseases and carcinoma, or to prepare cosmetics.